

IN THE CLAIMS:

Please **AMEND** claims 1, 13, 16, 23, 24 and 26, and **CANCEL** claims 11, 12, 21, and 25 without prejudice or disclaimer in accordance with the following:

1. **(CURRENTLY AMENDED)** A method of recording data on an optical recording medium, the method comprising:

generating channel modulated digital data;

generating a recording waveform having an erase pattern containing a multi-pulse of pulses having corresponding low and high powers, and a recording pattern in response to the channel modulated digital data; and

forming a first level of the channel modulated digital data as a mark and forming a second level of the channel modulated digital data as a space by using the generated recording waveform,

wherein:

the generating of the recording waveform comprises causing a power of a period between an end point of the erase pattern and a start point of the recording pattern to be the high power of the multi-pulse and a power of a leading pulse of the erase pattern to be the low power or the high power of the multi-pulse,

the generating of the channel modulated digital signal comprises forming a first level of an NRZI data signal as the mark and a second level of the NRZI data signal as the space, and

the generating of the recording waveform comprises forming a cooling pulse as a part of the erase pattern, the cooling pulse having a cooling power below the low power of the multi-pulse.

2. **(ORIGINAL)** The method of claim 1, wherein the generating of the channel modulated digital data comprises: performing a Run Length Limited (RLL)(2, 10) method.

3. **(ORIGINAL)** The method of claim 1, wherein the generating of the channel modulated digital data comprises: performing a Run Length Limited RLL(1, 7) method.

4-7. **(CANCELED)**

8. **(ORIGINAL)** The method of claim 1, wherein the generating of the recording waveform comprises: causing a ratio of a duration time of a high level and another duration time of a low level of the multi-pulse to be substantially 1:1.

9. **(ORIGINAL)** The method of claim 8, wherein the generating of the recording waveform comprises: causing the duration time of the high level to be half a clock cycle.

10. **(ORIGINAL)** The method of claim 8, wherein the generating of the recording waveform comprises: causing the ratio of the duration time of the high level and the duration time of the low level of the multi-pulse to be m:n where m and n are integers.

11-12. **(CANCELLED)**.

13. **(CURRENTLY AMENDED)** The method of ~~claim 12~~ claim 1, wherein: the generating of the recording waveform comprises: upon determining whether an ending time of the cooling pulse is less than or greater than 0.5Ts from a trailing edge of the NRZI data signal, causing a duration time of a leading pulse forming the erase pattern to be over 0.5Ts.

14. **(PREVIOUSLY PRESENTED)** The method of claim 13, wherein the generating of the recording waveform comprises: forming the period to have the high power and the low power according to the duration time of the last pulse of the multi-pulse.

15. **(ORIGINAL)** The method of claim 1, wherein the generating of the recording waveform comprises: forming the recording pattern having at least two power levels.

16. **(CURRENTLY AMENDED)** ~~The method of claim 1~~ A method of recording data on an optical recording medium, the method comprising:

generating channel modulated digital data;

generating a recording waveform having an erase pattern containing a multi-pulse of pulses having corresponding low and high powers, a first recording pattern preceding the erase pattern, a second recording pattern following the erase pattern, and a cooling pulse concatenating the first recording pattern and the erase pattern in response to the channel modulated digital data; and

forming a first level of the channel modulated digital data as a mark and forming a

second level of the channel modulated digital data as a space by using the generated recording waveform,

wherein the generating the recording waveform further comprises causing a power of a period between an end point of the erase pattern and a start point of the recording pattern to be the high power of the multi-pulse, a power of a leading pulse of the erase pattern to be the low power or the high power of the multi-pulse, and a power of the generating a cooling pulse to be concatenating the recording and erase patterns, in response to the channel modulated digital data, the cooling pulse having a power below the low power.

17. **(PREVIOUSLY PRESENTED)** The method of claim 1, wherein:
the recording pattern contains another multi-pulse adjacent to the erase pattern, and
the generating the recording waveform further comprises adjusting a power of the period between the another multi-pulse and the multi-pulse according to a property of a trailing pulse of the multi-pulse.

18. **(PREVIOUSLY PRESENTED)** The method of claim 17, wherein the power of the leading pulse of the erase pattern is equal to the power of the period.

19. **(PREVIOUSLY PRESENTED)** The method of claim 17, wherein the power of the leading pulse of the erase pattern is other than the power of the of the period.

20. **(PREVIOUSLY PRESENTED)** The method of claim 17, wherein the multi-pulse of the recording pattern further comprises a recording pulse having a recording power greater than the power of the period.

21. **(CANCELLED)**

22. **(PREVIOUSLY PRESENTED)** The method of claim 1, wherein the generating of the recording waveform further comprises forming the recording pattern using a recording multi-pulse, and the power of the period between the multi-pulse and the recording multi-pulse is greater than the power of leading pulse of the erase pattern.

23. **(CURRENTLY AMENDED)** The method of claim 22, wherein the power of the leading pulse of the erase pattern is equal to ~~the a~~ a power of trailing pulse of the erase pattern prior to the

period of the multi-pulses of the recording pattern.

24. (**CURRENTLY AMENDED**) The method of claim 22, wherein the power of the a trailing pulse of the multi-pulses of the erase pattern is ~~greater~~ less than the power of the period.

25. (**CANCELLED**)

26. (**CURRENTLY AMENDED**) A method of recording data on an optical recording medium, the method comprising:

generating channel modulated digital data;

generating a recording waveform having an erase pattern containing a multi-pulse of pulses having corresponding low and high powers, ~~and a~~ first recording pattern preceding the erase pattern, and a second recording pattern following the erase pattern in response to the channel modulated digital data; and

forming a first level of the channel modulated digital data as a mark and forming a second level of the channel modulated digital data as a space by using the generated recording waveform,

wherein the generating of the recording waveform comprises:

causing a power of a leading pulse of the erase pattern to be the low power of the multi-pulse and a power between an end of the erase pattern and a start point of a leading pulse of the second recording pattern to be the low power of the multi-pulse, and

generating a cooling pulse concatenating the first recording pattern and the erase ~~patternspattern~~, the cooling pulse having a cooling power below the low power.